

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.15**SOURCE INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** SIR-002418**Date Inspected:** 20-Feb-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**Location:** Changxing Dao, Shanghai**Quality Control Contact:** Don Walton**Quality Control Present:** Yes No**Material transfer:** Yes No N/A**Sampled Items:** Yes No N/A**Stock Transfer:** Yes No N/A**OK to Cut:** Yes No N/A**Rebar Test Witness:** Yes No N/A**Delayed/Cancelled:** Yes No N/A**Other:** Coating Inspection**Bridge No:** 34-0006**Component:** Lift 5 East, Lift 5 West, Cross Beam #4, OBG**Bid Item:** 77, 78, 79**Lot No:** B265**Summary of Items Observed:**

On this date Caltrans Office of Structural Materials (OSM) Quality Assurance (QA) NACE III coating inspector, Mr. James Lumley arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island in Shanghai, China. The purpose of the coating inspections are to monitor the surface preparation and coating applications for the SAS Bay Bridge project. This QA NACE III coating inspector observed the following:

**Lift 5 East**

Internal undercoated upper "U" Rib Stiffeners, FL-2-1 and Upper Chevron Assemblies from end weld seam to Panel Points 36, 35, 34, 33 were found to be non compliant with the contract documents as repairs were incomplete at the time inspection was requested by ZPMC for a "Final" inspection.

**Cross Beam #4**

Internal area which was incomplete for MT verification of weld on longitudinal stiffener was verified and mapped accordingly for completed NDT by Caltrans QA Joe Alaniz. Damaged area of NDT was repaired with organic zinc undercoat Interzinc 52.

**OBG 8CE**

Base metal surfaces from Panel Point 68 to end weld seam internal were abrasive blasted to an SSPC SP-10 condition and Interzinc 22 applied to the Bottom Plate and Side Plate areas of the floor "T" Stiffeners and Lower portions of the Chevron Assemblies and Floor Beam diaphragm. Profile amplitude was 72-78µm.

**Lift 5 East**

ZPMC requested a "Final" inspection on the internal undercoated surfaces or the "U" Rib Stiffeners and FL-2-1 Beams and Upper Chevron assemblies from Panel Points 31, 32, 33. Work was determined to be incomplete at time requested by ABF QA and Caltrans QA Lumley concurred with the findings.

**Lift 5 West**

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## SOURCE INSPECTION REPORT

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External Bottom Plate repair area of the centerline weld seam which was previously abrasive blasted and undercoated was tested for cure and chlorides, MEK testing of the undercoated areas exhibited a 5 Rating and chloride values were observed at 40µs/cm from Panel point 29-36 (end weld seam to end weld seam) Interfine 979 “Mist” coat was applied to the affected area. Also the internal Side Plate “T” stiffeners previously applied damaged undercoat was re-abrasive blasted and Interzinc 22 undercoat re-applied.

### OBG 7DW

Internal undercoated surfaces were still in process of undergoing touch up and repair operations. External undercoated surfaces were tested for cure and chloride, pencil hardness and Dry Film Thickness (DFT) subsequent testing revealed undercoated surfaces were in general compliance with the contract documents and Interfine 979 “Mist” coat applied to external surfaces. Internal surfaces of the Bottom Plate exhibited abrasive grit visible and required additional cleaning.

### Lift 5 East

External surfaces which were Heat Straightened on the Upper weld Side Plate were re-abrasive blasted to base metal and an SSPC SP-10 condition and Interzinc 22 undercoating re-applied to amend heat straightened damaged coating areas. Profile amplitude was 69-83µm.

### Lift 5 West

External surfaces which were Heat Straightened on the Upper Weld Side Plate were re-abrasive blasted to base metal and an SSPC SP-10 condition and Interzinc 22 undercoating re-applied to amend heat straightened damaged coating areas.

### Lift 5 East

External undercoated surfaces of the Cross Beam Bottom Plate were tested for cure and chlorides and were in general compliance with the contract requirements, Interfine 979 “Mist” coat was applied. Additionally the internal surfaces for the FL-2-1 beam at Panel Point #34 was re-abrasive blasted to base metal and an SSPC SP-10 condition and Interzinc 22 undercoat re-applied to amend excessive Dry Film Thickness (DFT) and mud cracked area repairs.

Note: All inspections were performed jointly with ABF & ZPMC QA/QC representatives and Caltrans QA Lumley when achievable. International Protective Coatings technical service representative were available for inspections and consultation.

### Summary of Conversations:

No relevant conversations on this date.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang (858) 699-9549, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Lumley, James	Quality Assurance Inspector
<b>Reviewed By:</b>	Peterson, Art	QA Reviewer

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